REMARKS / ARGUMENTS

In complete response to the Office Action dated April 5, 2007, on the above identified application, reconsideration is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-9, 11-13, 19-23, 26-29, 34, and 37-39 were rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 4,024,229 (Smith). Applicants respectfully traverse because Smith fails to disclose, teach, or suggest all of the limitations of the claims as amended. Because the various claims can be grouped in sets that are distinguished from the Smith disclosure for different reasons, the rejection of each claim set will be argued separately: A) claims 1-9, 11-13, 19-23, 26-29, and 34, B) claims 37-39.

Claim set A: 1-9, 11-13, 19-23, 26-29, and 34

Claims 1-9, 11-13, 19-23, 26-29, and 34 were rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 4,024,229 (Smith). Applicants note that claims 8-9 have been canceled. With respect to claims 1-7, 11-13, 19-23, 26-29, and 34, Applicants respectfully traverse because Smith fails to disclose, teach, or suggest all of the limitations of the claims as amended.

The Examiner points to columns 9-10, column 17, lines 59-62, and claim 1 of Smith as disclosing the claimed subject matter. Applicants respectfully disagree with the Examiner's construction of that portion of Smith.

Generally speaking, Smith discloses catalyst materials and their treatment at columns 9-10. To the extent that it addresses the issue of a catalyst, substrate, and other material associated with the catalyst and substrate, it discloses eight categories of physical arrangements for a catalyst:

1) a porous nickel substrate with powdered platinum covered by powdered carbon and wetproofing agent all one onside of the nickel substrate (column 9, lines 51-54);

2) a porous carbon plate or tube wetproofed to prevent flooding (column 9, lines 56-57) wherein the carbon is wetproofed by mixing an emulsion or solution of one or more various materials mixed with particulate carbon followed by evaporation of the emulsion vehicle or the solvent (column 9, line 64 through column 10, line 6);

3) a mass of wetproofed carbon granules or powder which float on the surface of the reductant (column 9, lines 57-58) wherein the carbon is wetproofed by mixing an emulsion or solution of one or more various materials mixed with particulate carbon followed by evaporation of the emulsion vehicle or the solvent (column 9, line 64 through column 10, line 6);

4) a bed of catalyst particles of depth greater than the capillary rise of the reductant supported so as to be in contact with the surface of the reductant (column 9, lines 59-62);

5) subliming a chloroinated paraxylylene dimer in a vacuum chamber and depositing the vapors on materials such as particulate carbon and porous sintered nickel (column 10, lines 27-31)

6) wetting a matrix of finely divided platinum in asbestos with a 1% solution of polyethylene in toluene followed by evaporation of the toluene (column 10, lines 32-37);

7) dissolving paraffin in a solvent such as hexane, toluene, or cetyl alcohol, introducing carbon into the mixture, and heating to evaporate the solvent (column 10, lines 38-43); or

8) mixing carbon with any one of paratoluene sulfonamide, polydichlorodifluoroethylene and octacecyl amine followed by heating to adhere it to the carbon (column 10, lines 44-48).

Applicants note that only physical arrangement 1 and 6 involve three materials as required by claims 1-7, 11-13, 19-23, 26-29, and 34. All other disclosed physical arrangements involve the catalyst and only one other material.

Applicants respectfully assert that physical arrangement 1 is not a disclosure of the subject matter of claims 1-7, 11-13, 19-23, 26-29, and 34, because the

wetproofing agent would have two surfaces, one of which is adjacent either powdered carbon, powdered platinum or porous nickel substrate, and the other of which is adjacent the surrounding process environment. In other words, it does not result in a sandwich structure, in order, or substrate, coating material, and oxidation promoter. Rather, it results in a sandwich structure, in order, of either: i) porous nickel substrate/powdered platinum/powdered carbon/waterproofing agent with one side of the waterproofing agent coating exposed to the process environment, ii) porous nickel substrate/powdered carbon/waterproofing agent with one side of the waterproofing agent coating exposed to the process environment, or porous nickel substrate/powdered platinum/waterproofing agent with one side of the waterproofing agent coating exposed to the process environment. Each of these four Smith configurations i-iv is accomplished for the purpose of reducing the tendency of the catalyst to flood out with the process solution (see column 5, lines 23-33 and 65-66; column 6, lines 52-56; and column 8, lines 38-49; column 8, line 59 through column 9, line 13; and column 13, lines 15-17). On the other hand, the coating material used in the present invention is for the purpose of adhering the oxidation promoter to the substrate. As such, physical arrangement 1 does not constitute 102(b) prior art.

Applicants also assert that physical arrangement 6 is not a disclosure of the subject matter of claims 1-7, 11-13, 19-23, 26-29, and 34, because the dried polyethylene coating would have two surfaces, one of which is adjacent either an asbestos particle or a platinum particle, and the other of which is adjacent the surrounding process environment. In other words, it does not result in a sandwich structure, in order, of substrate, coating material, and oxidation promoter. Rather, it results in a sandwich structure, in order, of either: i) asbestos particle/platinum particle/polyethylene with one side of the polyethylene coating exposed to the process environment, ii) platinum particle/asbestos particle/polyethylene with one side of the polyethylene coating exposed to the process environment, iii) asbestos particle/polyethylene with one side of the polyethylene coating exposed to the process environment, or iv) platinum particle/polyethylene with one side of the polyethylene coating exposed to the process environment. Each of these four Smith

configurations i-iv is accomplished for the purpose of reducing the tendency of the catalyst to flood out with the process solution (see column 5, lines 23-33 and 65-66; column 6, lines 52-56; and column 8, lines 38-49; column 8, line 59 through column 9, line 13; and column 13, lines 15-17). On the other hand, the coating material used in the present invention is for the purpose of adhering the oxidation promoter to the substrate. As such, physical arrangement 6 does not constitute 102(b) prior art.

For the foregoing reasons, the rejection of claims 1-9, 11-13, 19-23, 26-29, and 34 should be withdrawn.

Claim set B: 37-39

Claims 37-39 were also rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 4,024,229 (Smith). Applicants respectfully traverse because the Examiner bears the burden of showing unpatentability and the Examiner has not made that showing. The Examiner has not described why Smith discloses separate polysulfide generation and recovery zones and at least one oxidation promoter element that is movable between the zones.

As such, the rejection of claims 37-39 should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claims 10, 14-18, and 24-25 were rejected under 35 U.S.C. 103(a) over Smith). Applicants note that claims 10 and 17 have been canceled.

With respect to all of claims 14-16, 18 and 24-25, Applicants respectfully traverse because Smith fails to disclose, teach or suggest all of the limitations of the claims as argued with regard to claims 1-7, 11-13, 19-23, 26-29, and 34 in detail above.

With respect to claims 14-16 and 18, Applicants respectfully traverse because Smith fails to disclose, teach or suggest all of the claim limitations and the Examiner has not pointed to any disclosure, teaching or suggestion in the art of record with regard to:

- fixing the at least one oxidizing promoter element to the vessel (claim 14)

- positioning the at least one oxidizing promoter element at a bottom of the at least one vessel (claim 15)
- positioning the at least one oxidizing promoter element in the at least one vessel such that the at least one oxidizing promoter element is mobile in the at least one vessel (claim 16)
- rotating the substrate within the vessel (claim 18).

Applicants further assert that the Examiner's reliance upon limited case law regarding the degree of inventiveness of the size or shape of claimed articles in certain narrow circumstances is not applicable to claims 14-16 and 18 because the limitation is not merely one of size or shape.

As such, the rejection of claims 10, 14-18, and 24-25 should be withdrawn

Claims 30-33, 35-36, and 40-56 were rejected under 35 U.S.C. 103(a) over Smith in view of U.S. Patent No. 5,082,526 (Dorris). Applicants note that claim 35 has been canceled.

With respect to claims 30-33, and 36, Applicants respectfully traverse because Smith fails to disclose all of the claim limitations as argued with regard to claim 28 above and Dorris fails to cure those deficiencies.

With respect to claim 32 in particular, Applicants traverse because Dorris fails to disclose, teach or suggest all of the claim limitations. While the Examiner points to Figures 2-3, the Abstract, and claims 1-13 with regard to a stirrer, the Examiner does not address the limitations introduced by claim 32, namely: at least one oxidizing agent and a conduit for receiving at least one oxidizing agent, one end of the conduit fluidly communicating with the vessel, and the hollow shaft having a first aperture adjacent an upper end of the shaft and a second aperture adjacent a lower end of the shaft so as to allow the at least one oxidizing agent to flow through the first aperture and exit through the second aperture

With respect to claim 33 in particular, Applicants traverse because Dorris fails to disclose, teach or suggest all of the claim limitations. While the Examiner points to Figures 2-3, the Abstract, and claims 1-13 with regard to a stirrer, the Examiner does not address the limitations introduced by claim 33, namely: first and second vessels, the

at least one oxidation promoter element comprises a first oxidation promoter element positioned within the first vessel and a second oxidation promoter element positioned within the second vessel, and the system is configured to provide pulping liquor to the first vessel when the second vessel contains the at least one oxidizing agent and provide pulping liquor to the second vessel when the first vessel contains or receives the pulping liquor.

With respect to claims 40-56, the Examiner has failed to provide a prima facie case because none of the claim limitations of these claims have been addressed.

As such, the rejection of claims 30-33, 35-36, and 40-56 should be withdrawn.

CONCLUSION

Should the Examiner believe an additional telephone call would expedite prosecution of the application, the Examiner is invited to call the undersigned attorney at the number listed below. A Petition for a Three Month Extension of Time is being contemporaneously submitted with this Amendment. Otherwise, it is believed that no fee is due at this time. If that belief is incorrect, please debit deposit account number 01-1375. Also, the Commissioner is authorized to credit any overpayment to deposit account number 01-1375.

Respectfully submitted,

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